BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

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In the Matter of	)	
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PUBLIC UTILITIES COMMISSION	)	DOCKET NO. 2009-0108
	)	
Instituting a Proceeding to Investigate	)	
Proposed Amendments to the Framework for	)	
Integrated Resource Planning	)	
	)	

FINAL STATEMENT OF POSITION

OF THE HAWAIIAN ELECTRIC COMPANIES

AND

CERTIFICATE OF SERVICE

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FINAL STATEMENT OF POSITION

This Final Statement of Position ("PSOP") is respectfully submitted by Hawaiian Electric Company, Inc. ("Hawaiian Electric" or the "Company"), Hawaii Electric Light Company, Inc. ("HELCO") and Maui Electric Company, Limited ("MECO") (collectively referred to as the "Hawaiian Electric Companies" or "Companies") pursuant to the *Order Approving the Stipulated Procedural Order, As Modified* filed on September 23, 2009, and *Order Amending Schedule* filed on November 5, 2009, in the instant docket.

I. INTRODUCTION

A. HAWAII CLEAN ENERGY INITIATIVE ENERGY AGREEMENT

The proposed Clean Energy Scenario Planning Framework ("CESP Framework") is intended to be consistent with the planning mechanism agreed to in the *Energy Agreement among the State of Hawaii, Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs, and the Hawaiian Electric Companies* entered on October 20, 2008, between the Governor of the State of Hawaii, the State of Hawaii Department of Business, Economic Development and Tourism, the Division of

Consumer Advocacy of the Department of Commerce and Consumer Affairs, and the Hawaiian Electric Companies ("Energy Agreement"). The Energy Agreement is designed to move the State away from imported fossil fuels for electricity and ground transportation, and toward "indigenously produced renewable energy and an ethic of energy efficiency."

The Energy Agreement is a commitment on the part of the State and the Hawaiian Electric Companies to accelerate the addition of new, clean resources on all islands; to transition the Hawaiian Electric Companies away from a model that encourages increased electricity usage; and to provide measures to assist consumers in reducing their electricity bills.

The signatories to the Energy Agreement agreed to replace the current Integrated Resource Planning ("IRP") process with a new CESP process. Specifically, pages 36-37 of the Energy Agreement states:

- The CESP process will provide high level guidance on long term (10-20 years) direction and an Action Plan for near term initiatives (5-years), balancing how the utility will meet its customers' expected energy needs as modified by planned energy efficiency, renewables substitution and demand response, encouraging high levels of renewable and clean energy with distributed resources, while protecting reliability at reasonable costs.

- The CESP process will be conducted on an on-going basis with a new Clean Energy Scenario Plan developed in three-year cycles. The CESP process will include exploring alternative energy scenarios, risks and uncertainties, to develop a base case and variations for a 20-year planning horizon.

- Since clean energy actions and choices on one island may affect the entire State, all Hawaiian Electric utilities shall conduct the CESP process in parallel or as one CESP process for all three utilities, using common economic and other assumptions and common scenarios for technology, economic, and development paths and options, while maintaining the option to also develop island- specific scenarios.

- The Hawaiian Electric utilities shall conduct a comprehensive generation and transmission analysis every three years to support the evaluation of several planning scenarios to be considered in developing the new base case. In addition, the Hawaiian Electric utilities shall provide Locational Value Maps that will guide the identification of geographic areas of distribution system growth for potential application of new energy efficiency, demand response, and distributed generation and storage within Clean Energy Investment Zones.

- The CESP process will incorporate an Advisory Committee and a public review process.

B. INITIAL PROPOSED AMENDMENTS TO IRP FRAMEWORK

By Decision and Order No. 11523, filed on March 12, 1992, as amended by Decision and Order No. 11630, filed on May 22, 1992, in Docket No. 6617, the Commission established A Framework for Integrated Resource Planning ("IRP Framework"). On April 28, 2009, the Hawaiian Electric Companies, Kauai Island Utility Cooperative ("KIUC") and the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs ("Consumer Advocate"), requested that the Commission open an investigatory docket to review and establish a CESP Framework that revised the previous IRP Framework, and proposes a planning process to develop generation and transmission resource plan options for multiple 20-year planning scenarios and a 5-year Action Plan based on the range of resource needs identified through the various scenarios analyzed.

On May 14, 2009, the Commission issued its *Order Initiating Investigation*, initiating an investigative proceeding to examine the proposed amendments to the IRP Framework, as set forth in the April 28, 2009 letter from the Hawaiian Electric Companies, KIUC, and the Consumer Advocate. The *Order Initiating Investigation* also

set forth intervention deadlines and time periods by which a protective order and stipulated procedural order, as applicable, shall be filed.

The following entities were granted intervention status by the *Order Granting Intervention* filed on July 1, 2009 in this docket: the Department of Business Economic Development and Tourism ("DBEDT"), County of Hawaii, County of Maui, County of Kauai, Life of the Land ("LOL"), Haiku Design and Analysis ("HDA"), Hawaii Renewable Energy Alliance ("HREA"), Blue Planet Foundation ("Blue Planet"), Hawaii Solar Energy Association ("HSEA"), JW Marriott Ihilani Resort & Spa, Waikoloa Marriott Beach Resort & Spa, Maui Ocean Club, Wailea Marriott, and Marriott Hotel Services, Inc., on behalf of Kauai Marriott Resort & Beach Club (collectively "Marriotts")[1], and Forest City Hawaii Residential, Inc. ("Forest City") (collectively "Intervenors").[2]

Pursuant to the *Order Granting Intervention*, on July 29, 2009, the Hawaiian Electric Companies, KIUC, the Consumer Advocate, and the Intervenors (collectively, "Parties") filed a Proposed Stipulated Procedural Order ("Proposed SPO") setting forth the issues, procedures and schedule to govern the proceedings of the docket. All Parties, with the exception of LOL[3], stipulated to the Proposed SPO. On September 11, 2009, a revised stipulated procedural order was filed with the Commission for its consideration and approval. The revised stipulated procedural order clarified the position of LOL on

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[1] On August 17, 2009, Marriotts filed a letter to inform the Commission that the management of the Kauai Marriott Resort & Beach Club has changed from Marriott Hotels Services, Inc. to Essex House Condominium Corporation, a corporate affiliate of Marriott International, Inc.

[2] On October 2, 2009, Forest City submitted a motion with the Commission requesting that its status in the docket be amended from intervenor to participant. On October 26, 2009, the Commission issued its *Order Granting Forest City Hawaii Residential, Inc.'s Motion for Approval to Amend its Status as an Intervenor to a Participant.*

[3] On July 29, 2009, Life of the Land (LOL) filed *Comments on Proposed Stipulated Order* stating LOL's support of the Proposed Stipulated Procedural Order with the caveat that for the instant docket, "the Commission limit the number of hard copies to one: the original to be filed with the Commission."

the Proposed SPO, and made a minor modification to the procedural schedule. On September 23, 2009, the Commission filed its *Order Approving the Stipulated Procedural Order, As Modified*, approving the revised stipulated procedural order with modifications to the Statement of the Issues in Section I; the Stipulated Procedural Schedule in Exhibit A; and the number of copies to be filed with the Commission, set forth in Section II.C. The Commission modified the Statement of the Issues to the following:

1. What are the objectives of CESP and how do they differ from the objectives of IRP?
2. What is the basis for each of the proposed changes to the IRP process, and are these changes reasonable and in the public interest?
3. Whether the proposed changes to the IRP process should include changes to reflect differences between electric cooperatives and investor owned utilities?
4. What should be the role of the state's public benefits fee administrator?

C. OVERVIEW OF THE DOCKET PROCESS TO DATE

On August 11, 2009, a technical session was held at which the Hawaiian Electric Companies presented the proposed modifications to the IRP Framework, and the reasons and objectives for the modifications. Informal comments and questions were fielded from the Parties and clarifications were provided.

On August 28, 2009, the Parties circulated informal proposed modifications to the proposed IRP Framework filed on April 28, 2009. The informal proposed modifications offered by the Parties covered a variety of areas, including and not limited to: governing

principles for IRP/CESP; modeling and analysis; presumption of need; the intervention of interested parties; the composition and role of the advisory committee; the role and responsibilities of the utilities, the Commission, Consumer Advocate, and PBF Administrator; cost recovery; locational value maps; and renewable energy zones.

On September 15, 2009, the Parties held a second technical session to discuss the informal proposed modifications circulated by the Parties on August 28, 2009. The discussion at the second technical session focused on the purpose, goals and uses of the IRP/CESP plan and action plans; identification of proposed guiding principles and policies; and identification, explanation and clarification of the Parties informal proposed modifications. Specific topics discussed included, but were not limited to: public participation in the IRP/CESP process (i.e., having third-party analysis, opening the models to the public, understanding decision points in the analyses, and streamlining the process); cost recovery and incentives (i.e., new utility incentives, recovery is subject to Commission approval, and having mechanisms in place for cost recovery); the application of the proposed CESP Framework to other utilities such as KIUC and The Gas Company; and the ability to achieve timely approvals and matching the level of plan specificity to the level of approval.

On October 2, 2009, pursuant to the *Order Approving the Stipulated Procedural Order, as Modified*, the Parties filed their Preliminary Statement of Position ("PSOP").

On November 3, 2009, pursuant to the *Order Approving the Stipulated Procedural Order, as Modified*, the Commission circulated to the Parties a paper entitled *Clean Energy Scenario Planning: Thoughts on Creating a Framework*, which included comments on CESP from the Commission's consultant, the National Regulatory

Research Institute ("NRRI"). Parties' Responses to the NRRI comments were due by November 20, 2009.[4]

On November 6, 2009, the Parties held an informal technical session to discuss the Parties PSOP and potential Information Requests ("IRs") that would be submitted by the Parties, in addition to the comments on clean energy scenario planning from NRRI. On November 23, 2009, the Parties, with exception of KIUC, filed their respective responses to the NRRI comments.[5]

On November 10, 2009, the Parties filed their respective IRs, pursuant to the *Order Approving the Stipulated Procedural Order, As Modified.*[6] On November 25, 2009, the Parties filed their respective responses to IRs submitted by the Parties.

II. DISCUSSION

A. STATEMENT OF THE ISSUES

Pursuant to the *Order Approving the Stipulated Procedural Order, As Modified* filed on September 23, 2009, and *Order Amending Schedule* filed on November 5, 2009, the Commission stated four issues that the Parties should address in the subject docket. These four issues are discussed in the following section.

[4] Because November 20, 2009 was a Furlough Day for the Commission, filings due on this date were due on the next business day, November 23, 2009.

[5] On November 23, 2009, KIUC filed a letter with the Commission requesting approval for an extension of time to December 2, 2009, to file its response to the NRRI comments. KIUC filed its response to the NRRI comments on December 2, 2009.

[6] Information Requests were filed by the Counties of Hawaii, Kauai, and Maui (Jointly), LOL, Consumer Advocate, Blue Planet, HREA, KIUC, Marriotts, HSEA, DBEDT, and the Hawaiian Electric Companies.

1. What are the objectives of CESP and how do they differ from the objectives of IRP?

The IRP Framework has been in place since 1992 and there has been no change to the IRP Framework since then. However, the current planning environment has changed over the past 17 years, and has drastically changed in the last few years. The current planning environment is more dynamic with even greater uncertainties than before: fuel prices are extremely volatile; the economy is in a depression; renewable energy technologies have matured with new and emerging technologies under rapid development; and policies are being developed to institute climate change. The objectives of IRP were focused on selecting a single IRP Plan or "Preferred Plan" based on the "lowest reasonable cost" with an appropriate level of DSM to compliment traditional central-station supply-side resources which may have been suitable in the 1990s but are not suitable under the current environment.

New statutes and laws that have been implemented since 1992 having significant impact on the utility's future planning include, but are not limited to, the following:[7]

- Framework for Competitive Bidding (Docket No. 03-0372 – Decision and Order No. 23121, December 8, 2006)
- Renewable Portfolio Standards (Act 155 signed into law on June 25, 2009) establishing the minimum amount of renewable energy that needs to be included in the utility's plan through 2030.
- Energy-Efficiency Portfolio Standards (part of Act 155 (2009)), which requires the Commission to establish energy-efficiency portfolio standards that will maximize cost-effective energy-efficiency programs and technologies designed to achieve 4,300 GWh of electricity use reductions by 2030.
- Climate Change and GHG Regulations (Act 234 (2007), setting up a process for returning State GHG emissions to 1990 levels by 2020. At the federal level, the United States House of Representatives passed the Waxman-Markey bill in July 2009, which set-up a national cap-and-trade system for emissions permits that is designed to reduce CO_2 emissions by approximately 80% by 2050. The United

[7] Refer to the Hawaiian Electric Companies' *Preliminary Statement of Position* filed on October 2, 2009 for further discussion on these statutes and laws.

States Senate is currently considering parallel legislation and is expected to act early in 2010.

The establishment of IRP in the early 1990s ushered in utility-sponsored energy efficiency programs that allowed customers an opportunity to reduce their electric bills through the installation of energy efficiency measures. In Decision and Order No. 23258, ("D&O 23258") issued on February 13, 2007 in Docket No. 05-0069, the Commission ruled that a non-utility Third-Party Administrator ("Public Benefits Fee administrator" or "PBF administrator") was appropriate for design and implementation of energy efficiency programs in the Hawaiian Electric Companies' service territories. On July 1, 2009, after 13 years of utility administration, energy efficiency programs were transferred to a PDF administrator, including the responsibility of promoting, implementing, forecasting, monitoring, and managing the size and impacts of such programs.

Since the establishment of the IRP Framework, Hawaii utilities have moved to the forefront of the nation and the world in experiencing the challenges of managing electrical grids with significant utility-scale and aggregated residential-scale renewable energy resource penetrations. Hawaii, as a state, is blessed with an abundance of renewable energy resource options ranging from wind, solar, geothermal, biomass, wave/ocean, and biofuel options. However, to optimally avail ourselves of these resources, the maturity, compatibility and availability of these resources also needs to be considered, as we transform our existing grid to meet the clean energy goals safely and reliably.

The existing utility systems have evolved over the decades to most economically serve load with a fleet of generators ranging from baseload units to fast starting units. Control systems, operational experience and planning tools have also evolved to operate

and reliably manage these more traditional "dispatchable" units. Today, like other utilities in California, Texas and New York, the Hawaiian Electric Companies are considering an abundance of "non-dispatchable" resources like wind and solar on their island grids. These "non-dispatchable" resources require new information, new operational tools and learned-expertise in order to be optimally managed.

HELCO and MECO are already contending with the challenges of reliably operating the system with existing wind energy penetrations close to 15% by day and as high as 35% by night, penetration levels that are non-trivial even on interconnected mainland grids. Both utilities have managed current levels and are amassing data that will be helpful to inform future direction and needs as penetration continues to increase and technology improves. As the Hawaiian Electric Companies systems also integrate significant levels of "non-dispatchable" resources, new tools and planning capabilities will be needed to inform the utility on how to plan and manage the evolving grid.

Emerging under programs like Net Energy Metering ("NEM"), Feed-in Tariffs ("FIT") and the pending PV Host program currently under review by the Commission, these small, customer-sited generation resources in addition to new demand-side efficiency, conservation, and response resources can play a significant role in helping to reach clean energy targets, diversify customer choice and help manage intermittency effects on the grid. The characteristic performance features of these resources (including photovoltaic ("PV"), solar hot water, and local energy storage) to provide generation to meet the customer demand and possibly provide some system support features including reliability, are currently being monitored by the Hawaiian Electric Companies but are also being assessed nationally. Also, an interactive and smart grid of the future, utilizing

technologies such as Advanced Metering Infrastructure ("AMI"), is being envisioned by many for the islands to be able to accommodate a more diverse and abundant supply of new demand-side options and distributed generation alternatives, and to manage the intermittency of "non-dispatchable" renewable generation resources.

To accommodate a larger and diverse portfolio of renewable energy resources of different technologies, sizes, technical and operational characteristics, rapid technological changes and continued improvements to system control features, system-wide solutions down to local component and demand-side technologies and energy usage behavior changes need to be considered. As such, the objectives of CESP must be flexible to account for the rapid change in regulations and statutes, technology, and timing of market drivers, while preserving the need to provide reliable power to customers.

2. What is the basis for each of the proposed changes to the IRP process, and are these changes reasonable and in the public interest?

The Hawaiian Electric Companies' proposal to establish a CESP Framework based on revisions to the IRP Framework was developed given the current planning environment described in the preceding section in response to the issue of CESP objectives. The uncertainties that the utilities currently face warrant a move towards a more dynamic planning process. The past IRP processes focused on "least cost planning", comparing demand-side resources against supply-side resources, and comparing fossil-fueled generation against renewable energy generation. There are legislatively enacted goals that the utilities (i.e., RPS and GHG emissions), and the Commission (i.e., EEPS), must achieve. The utility's planning process needs to focus on achieving the clean energy goals in the current dynamic environment. The Companies'

proposed revisions to the IRP Framework represent an attempt to accomplish this under the CESP process.

The CESP process would focus on the development and evaluation of multiple 20-year resource planning scenarios instead of a single "preferred plan." Each CESP scenario would be developed using a set of planning assumptions. Examples of the kinds of assumptions that would form the basis for a scenario include load forecasts, fuel forecasts (fossil and biofuel), programmatic options, differing market penetrations for demand-side resources and customer-sited distributed generation, GHG regulations, etc. The assumptions would vary for the different CESP scenarios in order to facilitate planning analysis across a wide range of possible futures and uncertainties for achieving the clean energy goals. For each scenario, a 20-year resource plan will be developed based on the assumptions set for the scenario that considers, among other aspects, statutory and regulatory requirements, cost to customers, the achievement of desired levels of reliability, operational requirements and constraints, and risk of the plan not achieving these many objectives.

Instead of selecting only one CESP scenario to develop the 5-year Action Plan, the results of developing the multiple CESP scenarios and the associated 20-year plans for each scenario would be used to develop a single 5-year Action Plan. The Action Plan could include elements or themes from one or multiple CESP scenarios. Since the proposal is for the utility to conduct a CESP process every three years and there is a greater level of uncertainty with longer-term assumptions and outcomes, the focus of the proposed CESP is on the near-term since the long-term initiatives would likely be

changed in the following CESP process to better reflect the current environment at that time.

The Proposed CESP Framework was also updated to reflect the change in the implementation of the energy efficiency programs as discussed in Section II.A.1 above. The Commission recognized that inputs from the PBF administrator would be necessary in any future system wide planning.

The PBF administrator must be an active participant in the utility's planning process and the Proposed CESP Framework reflects this. Input will be required from the PBF administrator, taking into account the intimate knowledge of its manpower and budget constraints. These inputs will form the basis for the levels of energy efficiency savings that can be achieved and therefore incorporated into the CESP scenarios. The utilities, through modeling software will then test the cost effectiveness of the energy and demand savings provided by the PBF administrator. The Commission will ultimately have the ability to adjust the PBF administrator's goals and budgets based on the results of the cost effectiveness analysis while also meeting the goal established by the EEPS.

The Competitive Bidding Framework has also been incorporated into the Proposed CESP Framework. Because implementing a competitive bidding process results in a market based determination of project technology, location and costs, it is unnecessary for the utility to consider "all" feasible supply-side resource options, as the utility will not know what resource will actually be selected as a result of the RFP. The CESP scenarios will use generic resource type data to help determine issues including but not limited to, the size, timing, location, and operational characteristics of the generation resource or block of generation resources. Detailed evaluation of all possible resources

will not be required in the CESP process, since it is unknown what resource will actually be selected through the competitive bidding process.

The Hawaiian Electric Companies remain committed to having public participation in the proposed CESP process, as was required under the IRP Framework. For all of the past IRP processes, Advisory Groups were formed across a diverse range of members representing both public and private entities in the community. To encourage public participation, the Hawaiian Electric Companies have utilized different methods of incorporating input from the Advisory Group and public in the IRP process.

Some advisory group members have expressed in past IRP processes that the utility should be bound to follow the advice of the advisory group. The utility maintains that planning for the utility system must be a utility product since it is the utility's responsibility to comply with statutes and laws. Specifically, the utility has the responsibility and obligation, among others, to: (1) ensure that there is an adequate supply of generation, (2) provide reliable service, (3) comply with RPS law, and (4) comply with State and possibly federal GHG regulation. The Hawaiian Electric Companies have received and incorporated input from the advisory group and public in the past IRP processes to the extent technically possible and feasible. It is not expected that consensus could be reached amongst the various Advisory Group members, and could likely prolong the planning process. Even if consensus is reached among the members of the Advisory Committee, there is no assurance that a plan developed by the Advisory Committee would contain the necessary technical and analytical work necessary to ensure that the plan developed would be one which would result in an implementable plan that provides the needed generation capacity, energy mix, and

infrastructure necessary to allow the utility to provide reliable power and conform with regulatory and legal requirements in the generation and delivery of energy.

There have also been suggestions that the IRP process should be conducted by an independent third party and not the utility, that an independent third party should do the technical analysis for the utility, and that the utility's modeling software should be accessible for a third party to analyze and review. However, an independent third party would require vast technical knowledge in not only electric utility systems, but the unique parameters of Hawaii's non-interconnected island systems, for which there are not many comparable systems. They would also need to be familiar with the many operating standards and policies, planning criteria, and Hawaii-based costs for construction and timing of resource development. Second, the independent third party would have to be familiar with the utilities' modeling software and data to understand what is being analyzed and much of the utilities' modeling software has been tailored over time to better model Hawaii's island systems.

Although it is possible for an independent third party to learn about the Companies' island utility grids and modeling software, it would take a lot of time and duplication of resources which in the end means a significant cost impact to customers. Having an independent third party conducting the CESP process would place a considerable burden on Hawaiian Electric Company customers. However, after considering NRRI's suggestion that "[w]ith this diversity of participants, a neutral facilitator seems necessary" and discussions with the other parties in informal workshops on the need to find a means to maintain a short schedule for conducting the CESP process and to obtain Commission decisions, the Hawaiian Electric Companies are proposing to

include the role of an Independent Observer in the CESP process. Under such a role, the Independent Observer could facilitate Advisory Committee and any public meetings, monitor all steps throughout the CESP process, and report to the Commission at key points along the planning process (such as at the establishment of key planning assumptions, at the establishment of scenarios to be evaluated, at the development of 20-year resource plans for each scenario and at the end of the process upon the filing of the CESP plan with the Commission) to facilitate focused review at these key points of the planning process and obtain Commission concurrence at each of these key steps. This would, in turn, facilitate timely approval of the CESP Action Plan as described in the Proposed CESP Framework (Attachment A to this FSOP). In addition, the Independent Observer could assist with resolving any disputes that arise during the process. Having an Independent Observer provides balance between a more transparent planning process with the cost impact to customers more appropriately than if a third party entity conducted the entire planning process. The ideal Independent Observer would have a good understanding of technical, legal and regulatory matters specific to the Hawaii electric systems. The Companies are currently unaware of any other jurisdiction in which their IRPs are conducted with an Independent Observer performing a similar role and it may be difficult to find a large pool of consultants qualified to fill the Independent Observer role as contemplated above.

The Proposed CESP Framework that the Hawaiian Electric Companies previously provided included provisions regarding the Commission's responsibilities in the CESP process. As previously proposed, the Commission's responsibility is to "review and approve in whole or in part the utility's CESP as a reasonable course for meeting the

energy needs of the utility's customers . . . ." and a decision to be issued within six months from the date that a CESP Action Plan is filed for review. If a decision is not issued within that period of time, the CESP Action Plan would be deemed "approved". It should be noted that approval of the CESP Action Plan would elevate the status of the preferred resource options in the Action Plan, such as energy-efficiency programs administered by the PBF administrator, demand response programs, third-party IPP projects, and utility resources, to give them a presumption of need in any subsequent siting proceeding.

This previously proposed amendment regarding "automatic approval" of a CESP Action Plan was developed due to a concern that plans need to be developed and approvals must be obtained in a manner that allows timely execution of initiatives to implement the Action Plan and ultimately ensure the completion of a proposed project. Timely review and approvals of resource plans are more critical than before because of the longer resource procurement and development cycle as a result of the Competitive Bidding Framework, greater permitting requirements for generation and transmission projects, and the more dynamic nature of electric utility planning due to more rapid changes in economic assumptions, new customer end-users and changes in usage behavior, development of new generation and T&D technologies, and other parameters that can have a significant impact on resource planning and the timing for new generation and transmission. To facilitate implementation of projects, studies, programs, and other elements of the CESP Action Plan while preserving the Commissions' ability to carefully review the CESP Action Plan, the framework includes a provision that allows the utility to file for Commission review and approval individual applications for programs or

elements of the CESP Action Plan before the Commission issues a final decision approving the CESP Action Plan and the review of these individual applications by the Commission may take place in parallel with its review of the CESP Action Plan.

The Hawaiian Electric Companies have removed the previously mentioned requirement for "automatic approval" from the Proposed CESP Framework, Attachment A, under the assumption that with the inclusion of the Independent Observer reporting to the Commission and keeping the Commission informed that the Commission would provide timely approval of the CESP Action Plan.

In addition, the current IRP Framework states that "The integrated resource plan and program implementation schedule approved by the commission shall govern all utility expenditures for capital projects, purchased power, and demand-side management programs." IRP Framework, §III.D.5 This provision is also proposed to be amended to reflect references to the new CESP Framework and PBF administrator who will implement the energy efficiency programs.

In an effort to keep the Commission and public informed of changes to assumptions used in the CESP process, the Hawaiian Electric Companies have added that the Advisory Committees will continue to meet at least quarterly between full cycles of the CESP and that at minimum one evaluation report would be filed to update the Action Plan. If circumstances in the planning environment change significantly, the Hawaiian Electric Companies would hold Advisory Committee meetings and file evaluation reports more frequently in response to those changes. The Hawaiian Electric Companies' Proposed CESP Framework sets the minimum requirements for meetings and evaluation reports.

The Hawaiian Electric Companies are also adding two new planning initiatives to the Proposed CESP Framework: Renewable Energy Zones ("REZ") and Locational Value Maps ("LVM"). The REZ, currently being developed by DBEDT[8], is proposed to identify areas that contain significant renewable energy resource potential. This potential can include resource characterization parameters such as land use zoning, air/water permitability, potential for visual impacts, potential for land value impacts, community support, grid interconnection requirements and system integration requirements, among others. The Proposed CESP Framework includes as part of the CESP process for the utility to identify the possible transmission infrastructure required to integrate the renewable energy resources in the REZ and the operational integration needs or limitations.

The LVM is envisioned to be an informational visualization tool that will identify geographic areas of distribution system growth within the next 3-5 years where distributed resources and energy efficiency could be beneficial within the existing transmission and distribution system limits. The LVM is also envisioned to identify at a point in time, the level of DG penetration on distribution circuits as a percentage of peak circuit load in a general geographic area. LVMs could be used both as an input and output to the CESP process. For example, initial LVM could be used to develop forecasts for distributed generation as a planning assumption for the development of CESP scenarios. The results of the various CESP scenarios would be used to develop the CESP Action Plan which may include as an action plan item the analysis or study to identify transmission and distribution system upgrades or energy efficiency programs that, in turn, could update the LVM. LVM efforts will provide more robust foresight to

[8] Act 155 (2009) mandates the Energy Resources Coordinator (within DBEDT) to develop REZ.

plan customer choice options under NEM, FIT and PV-Host and future energy efficiency DSM programs.

3. Whether the proposed changes to the IRP process should include changes to reflect differences between electric cooperatives and investor owned utilities?

The Hawaiian Electric Companies' Proposed CESP Framework that was filed on April 28, 2009, as amended on October 2, 2009, and further amended in this FSOP, provides for waivers and exemptions from the framework for electric cooperatives based on continued discussions among the parties. As a party in this docket, KIUC may propose changes to reflect differences between electric cooperatives and investor owned utilities and the Hawaiian Electric Companies have no objections to KIUC proposing revisions as it pertains to electric cooperatives.

4. What should be the role of the state's public benefits fee administrator?

As previously noted in Section II.A.2 of this FSOP, the PBF administrator must be an active member throughout the proposed CESP process. The PBF administrator will be responsible for forecasting and developing the energy-efficiency programs under different market penetrations (i.e., to meet the EEPS) for use in the scenario analyses, will be responsible for the expected savings and expenditures for energy-efficiency programs included in the Action Plan, and will also be responsible for providing information for any evaluation report that the Hawaiian Electric Companies must file. The PBF administrator will need to work collaboratively with the Hawaiian Electric Companies to address substantial differences between original forecasted estimates and actual achieved impacts and how it could impact the Hawaiian Electric Companies' Action Plan items.

B. QUESTIONS POSED BY NRRI

In its paper entitled *Clean Energy Scenario Planning: Thoughts on Creating a Framework*, the Commission's consultant, NRRI, posed a number of questions regarding the proposed CESP Framework, and recommended to the Commission that the Parties be invited to address these questions as part of their respective FSOPs.[9]

1. **Does the proposed framework provide a reasonable process for defining the question(s) that the CESP must answer?**

   Yes. The Hawaiian Electric Companies' Proposed CESP Framework defines the questions that the CESP process should consider in the Goal of Clean Energy Scenario Planning as shown on page 4 of Attachment A. The NRRI Paper, Page 7, recommends that the CESP should answer the question, "What actions must Hawaii take to be prepared, under a variety of potential futures, to supply its energy service needs cleanly, reliably, and at reasonable cost?" Similarly, the proposed framework states, "The goal of Clean Energy Scenario Planning ("CESP") is to develop CESP scenarios that will provide high level guidance on a long term (10-20 years) direction, which will then be utilized to develop a CESP Action Plan for near term (5 years) initiatives, balancing how the utility will meet clean energy objectives, customer's expected energy needs, and protecting system reliability at reasonable costs under various scenarios".

2. **Does the proposed framework enable the Commission to meet its statutory requirements regarding the review and establishment of RPS and EEPS targets?**

[9] See Page 10, Section IV and Appendix C of the NRRI Paper.

Yes. The Proposed CESP Framework, provides a description of the submittals to the Commission by the utility, and the timelines and frequency of the submittals in Section III (The Planning Context), pages 9-19 of Attachment A, which could be aligned to support the Commission's timeframes in meeting its statutory requirements regarding the review and establishment of RPS and EEPS targets.

The Proposed CESP Framework satisfies the recommendation in NRRI's Paper, Page 7, which states, "As for the timeline, one real-world consideration is to make the planning cycle occur frequently enough so that the Commission meets its once-every-five years statutory responsibility to report to the legislature on the status of and need for changes to the Renewable Portfolio Standards....We suggest, therefore, that the parties should propose specific planning cycles based on their individual proposed frameworks." The Hawaiian Electric Companies' proposed three-year CESP cycle and minimum one CESP update between full cycles will provide multiple opportunities for the Commission to review Company plans for RPS and EEPS compliance for a multiple scenarios and enable the Commission to meet its statutory requirements regarding the review and establishment of RPS and EEPS targets.

3. **Does the proposed framework provide a reasonable process for defining a starting point for scenario planning?**

Yes. The proposed CESP Framework provides a process for establishment of a "starting point" during the Planning Phase of CESP. Section II.C.4 of Attachment A, page 6, briefly describes a list of State initiatives and Commission proceedings that is very similar to NRRI's Appendix A: Partial List of Mandates for Inclusion in a "Starting Point". Section III.A.1 of the Proposed CESP Framework, Attachment A, page 9, refers to "Planning is that process in which the State initiatives, mandates, and Commission proceedings establish a "starting point" for the development of the CESP scenarios."

4. **Does the proposed framework provide a reasonable process for discovering a plausible range of uncertainties and trends?**

Yes. The Hawaiian Electric Companies developed the Proposed CESP Framework around the objective of having a planning process that would analyze a range of possible futures. Section II.C.1, page 5 of Attachment A, describes the CESP scenarios that should be developed during the CESP process. Section IV of the Proposed CESP Framework, pages 19-22 of Attachment A, briefly describes some of the forecasts or data that could be used in developing the CESP scenarios. Some uncertainties and trends could be used in the development of the planning assumptions. The Proposed CESP Framework does not specifically define the uncertainties and trends but allows the CESP process to determine what uncertainties and trends should be considered at that time.

5. **Does the proposed framework differentiate between uncertainties and predetermined trends?**

No. The Hawaiian Electric Companies do agree with NRRI's suggested definitions and use of the terms "uncertainties", "predetermined trends", and "expected events" that can be used in the context of scenario planning. During the planning step of the CESP process (Section III.A.1, page 9 of Attachment A), is the preferable point at which the parties of the Advisory Committee can discuss, obtain clarification, and participate in establishing the planning assumptions, uncertainties, predetermined trends, expected events, etc. for use in developing the CESP scenarios.

6. **Does the proposed framework provide a reasonable process for identifying the drivers of uncertainty that make a difference?**

Yes. Section III.A.1 of the Proposed CESP Framework, page 9 of Attachment A, describes the planning step of the CESP process to be the mechanism for when the drivers for uncertainties are to be identified in the development of the CESP scenarios. Section III.D.1.a.(i) on page 11 of Attachment A, describes the general requirements of what should be included as part of the CESP filing submitted to the Commission and lists the underlying assumptions used in the CESP scenarios as well as the drivers for uncertainties.

7. **Does the proposed framework provide a reasonable process for defining a reasonable number of scenarios that define a plausible range of different futures for planning decisions?**

Yes. Section III.D.1.b of the Proposed CESP Framework, page 11 of Attachment A, states that, "A reasonable number of CESP scenarios shall be analyzed and developed to reflect a range of possible energy-related policy choices and risks facing the utility systems and citizens."

The "reasonable number of CESP scenarios" should be determined during the CESP process and not specifically defined in the framework. As stated in the Hawaiian Electric Companies' response to CA-HECO-IR-1b in this instant docket filed on November 25, 2009, "Rather than the CESP Framework, the Hawaiian Electric Companies believe that the CESP process, in which relevant planning issues and questions are to be evaluated, is the preferable point at which to determine what is a reasonable and appropriate number of scenarios to evaluate. Defining scenarios, or the number of scenarios to evaluate in a CESP framework, results in unnecessary inflexibility in the framework."

8. **Does the proposed framework enable the Commission to make timely and informed decisions about the budget for the Public Benefits Fee Administrator?**

Yes, if the timing of the CESP process is aligned with the Commission's timeframe regarding the budget for the Public Benefits Fund Administrator. Please refer to the response provided for Question 2.

9. **Does the proposed framework provide a reasonable process for assessing actions and making decisions?**

Yes. Section III.A.2 of the Proposed CESP Framework, pages 9-10 of Attachment A, describes the Programming step of the CESP process.

"Programming is that process by which the utility's CESP scenarios are evaluated and programs or elements from one or more scenarios are scheduled for implementation over a five-year period....The result of this process is a program implementation schedule or CESP Action Plan. The CESP Action Plan represents a strategy or timetable for program implementation." Developing the CESP Action Plan based on the results of the various CESP scenarios provides a reasonable and flexible process for the utility to assess actions and make decisions for the near-term to achieve the longer term goals.

10. Does the proposed framework provide a reasonable process for ongoing monitoring and adjustments to approved plans?

Yes. The Proposed CESP Framework provides many processes for ongoing monitoring and adjustments to the CESP Action Plan.

As explained in the Hawaiian Electric Companies' response to CA-HECO-IR-1.d in this instant docket filed on November 25, 2009, "possible changes to the Action Plan would be addressed through the continuation of Advisory Committee meetings and the evaluation report process. Section III.E.1.c of the Proposed CESP Framework was added to reflect the HECO Companies' commitment to continue meeting with the Advisory Committee at least quarterly between full cycle processes. The purpose of the evaluation report is to update the Action Plan as required by Sections III.D.3 and III.D.4. Updating the Action Plan does not necessarily mean redoing the entire scenario planning analysis. An objective of defining and selecting CESP scenarios to analyze is to cover the likely range of possible futures adequately that the evaluation would

discuss how the change in conditions is reflected in the update to the Action Plan. Keeping in mind that the proposed CESP framework is intended to repeat the full cycle process every three years, the intent is that Action Plan should be fairly up-to-date."

11. **Does the proposed framework create an efficient, transparent process that involves all relevant decisionmaking entities?**

Yes. The Proposed CESP Framework did not lessen the public participation or transparency of the planning process from what was in the IRP Framework, and in fact, increased it to include the continuation of Advisory Committee meetings between full CESP cycles.

Based on NRRI's suggestion that a "neutral facilitator" may be necessary with such a diverse group of stakeholders (NRRI's Paper, page 10), the Hawaiian Electric Companies have added the role of an Independent Observer to the Proposed CESP Framework in Section II.G of Attachment A, pages 7-9. The role of the Independent Observer in the Proposed CESP Framework is similar to the Independent Observer in the Commission's Competitive Bidding Framework. The intent of having an Independent Observer is to have a more efficient, timely, and transparent process than in the past.

12. **Does the proposed timeline provide adequate time for the participants to address effectively each step of the framework?**

Yes. The Proposed CESP Framework should provide adequate time for the participants to address each step of the Companies' envisioned CESP process.

13. **Does the proposed frequency of scenario-planning cycles allow the Commission to meet its related statutory responsibilities efficiently?**

Yes. As indicated in Section III.D.2 of the Proposed CESP Framework, page 10 of Attachment A, the full CESP cycle is every three years. With the additional requirements for evaluation reports and continued Advisory Committee meetings between full CESP cycles, the Commission would be well informed to meet its related statutory responsibilities. Please refer to the response provided for Question 2.

III. ADDITIONAL MODIFICATIONS TO THE PROPOSED CESP FRAMEWORK

Based on continued dialogue with the other Parties in this docket process to date, including information requests and responses to information requests filed by the Parties, the Hawaiian Electric Companies have incorporated the following additional changes to the proposed CESP Framework the Hawaiian Electric Companies filed on April 28, 2009, and modified on October 2, 2009, in Attachment A to its Preliminary Statement of Position, as follows:

1. Inclusion of an Independent Observer in the CESP process, similar to the Independent Observer in the Commission's Competitive Bidding Framework.
2. Removal of the 6 month deadline for Commission approval of the CESP Action Plan.

3. Clarification of the Renewable Energy Zones being the responsibility of the Energy Resources Coordinator as modified by Act 155.

4. Minor clarifications throughout.

Attachment A to this FSOP shows red-line revisions discussed above to the proposed CESP Framework that the Hawaiian Electric Companies filed on April 28, 2009, and subsequently modified on October 2, 2009.

IV. CONCLUSION

The Hawaiian Electric Companies' Final Statement of Position reflects the Hawaiian Electric Companies' current position on its proposed amendments to the IRP Framework filed on April 28, 2009, modified on October 2, 2009, and further modified in this FSOP.

The Hawaiian Electric Companies Proposed CESP Framework provides for a flexible, transparent, and timely scenario planning process to achieve the State's clean energy goals by: (1) addressing uncertainties in planning for the future through a range of scenarios; (2) developing a near-term action plan based on the various long-term scenarios; (3) incorporating more transparency with the inclusion of an Independent Observer; (4) providing more emphasis on transmission planning and infrastructure; and (5) providing distribution level information through the Locational Value Maps.

The Hawaiian Electric Companies continues to work with the Parties to discuss proposed recommendations and issues to arrive at proposed amendments to the IRP Framework that are reasonable and in the public interest.

DATED: Honolulu, Hawaii, December 21, 2009.

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CERTIFICATE OF SERVICE

The foregoing Final Statement of Position of the Hawaiian Electric Companies was served on the date of filing by hand delivery, or mail, postage prepaid and properly addressed, or electronically transmitted to each such Party, as indicated below.

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A PROPOSED FRAMEWORK FOR CLEAN ENERGY SCENARIO PLANNING

Revised December 21, 2009

Deleted: April 28, 2009

Hawaiian Electric Company, Inc.
Hawaii Electric Light Company, Inc.
Maui Electric Company, Ltd.

Deleted: Division of Consumer Advocacy, Department of Commerce and Consumer Affairs¶

A PROPOSED FRAMEWORK FOR CLEAN ENERGY SCENARIO PLANNING
Revised December 21, 2009 Deleted: April 28, 2009

I. Definitions

Unless otherwise clear from the context, as used in this framework:

"Action Plan" means a program implementation schedule representing a strategy or timetable based on the scenarios analyzed for achieving the utility's clean energy objectives over the first five-year period of the 20-year planning horizon. The five-year period of the Action Plan is updated with the utility's evaluation report by dropping the preceding year from the schedule and including a new year.

"CHP" means combined heat and power system which is an electricity generating system whose waste heat is captured and used for heating and/or cooling applications.

"Clean energy" means electrical energy generated using renewable energy as a source or as electrical energy savings brought about by the use of renewable displacement or off-set technologies or energy efficiency technologies as defined as "renewable electrical energy" in HRS ch. 269, part V, section 269-91.

"Clean Energy Investment Zones" means areas shown on the Locational Value Map where there is a high value to incremental investment in distributed generation, demand response, energy efficiency, or CHP.

"Clean energy objectives" means moving Hawaii towards achieving a sustainable, clean, flexible, and economically vibrant energy future.

"Clean Energy Scenario Planning" or "CESP" means the process governed by this framework which is a mandatory guide for the utilities.

"Demand-side management" or "DSM" means programs designed to influence utility customer uses of energy to produce desired changes in demand. It includes conservation, energy efficiency, demand response, and renewable substitution.

"Distributed Generation" or "DG" means small-scale electric generating technologies installed at, or in close proximity to, the end-user's location.

"Energy Agreement" means the October 2008 Energy Agreement Among the State of Hawaii, Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs, and the Hawaiian Electric Companies.

"Feed-in-Tariff" or "FIT" means a mechanism for the procurement of renewable resources in the HECO Companies' service territories. The general principles for the implementation of FIT will apply to photovoltaic, concentrated solar power, onshore wind, and in-line hydropower projects up to 5MW depending on technology and location. FIT rates will be based on the project cost and reasonable profit of a typical project with rates differentiated by technology or resource, size and interconnection costs.

"Hawaii Revised Statutes" or "HRS" means current laws governing the State of Hawaii.

"Hawaii Clean Energy Initiative" or "HCEI" means the Memorandum of Understanding between the Governor of the State of Hawaii and the U.S. Department of Energy signed in January 2008, having the goal to decrease energy demand and accelerate use of renewable, indigenous energy resources in Hawaii in residential, building, industrial, utility, and transportation end-use sectors, so that efficiency and renewable energy resources will be sufficient to meet 70% of Hawaii's energy demand by 2030.

"Locational Value Map" or "LVM" means geographic areas of distribution system growth within the next 3-5 years where distributed resources and energy efficiency could be beneficial within the existing transmission and distribution system limits.

"Net Energy Metering" or "NEM" means measuring the difference between the electricity supplied through the electric grid and the electricity generated by an eligible customer-generator and fed back to the electric grid over a monthly billing period as defined in HRS ch. 269, part VI, section 269-101.

"Program" means resources and/or activities in the CESP scenarios and/or CESP Action Plan.

"Public Benefit Fee Administrator" or "PBF Administrator" means the third-party administrator of energy efficiency demand-side management programs as defined in HRS ch. 269, part VII, section 269-122.

"Renewable Energy Infrastructure Program" or "REIP" means a mechanism designed to timely recover costs incurred by the electric utility for the development of and investment in renewable energy infrastructure projects in order to facilitate third-party development of renewable energy resources and maintain current renewable energy resources. The REIP includes the Clean Energy Infrastructure Surcharge included in the Energy Agreement.

"Renewable Energy Zones" or "REZ" means identification of areas that contain significant renewable energy potential.

"Renewable Portfolio Standards" or "RPS" means the current law governing the State of Hawaii as defined in HRS ch. 269, part V, as modified by Act 155.

"Request for Proposal" or "RFP" means a written request for proposal issued by the electric utility to solicit bids from interested third-parties, and where applicable from the utility or its affiliate, to supply a future generation resource of a block of generation resources to the utility pursuant to the competitive bidding process.

"Scenarios" means a range of possible futures reflecting possible energy-related policy choices and risks facing the utility and its customers.

"Supply-side programs" means programs designed to supply power. It includes renewable energy.

"Total resource cost" means the total cost composed of the utility costs and the costs by participants in the demand-side management programs.

"Utility costs" means the costs to the utility (including ratepayers), excluding costs incurred by participants in a demand-side management program.

II. Introduction

A. Goal of Clean Energy Scenario Planning

The goal of Clean Energy Scenario Planning ("CESP") is to develop CESP scenarios that will provide high level guidance on a long term (10-20 years) direction, which will then be utilized to develop a CESP Action Plan for near term (5 years) initiatives, balancing how the utility will meet clean energy objectives, customers' expected energy needs, and protecting system reliability at reasonable costs under various scenarios.

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B. Governing Principles (Statements of Policy)

1. The development of the CESP scenarios and the CESP Action Plan are the responsibility of each utility.

2. CESP scenarios and the CESP Action Plan shall comport with state and county environmental, health, and safety laws and formally adopted state and county plans.

3. CESP scenarios and the CESP Action Plan shall be developed upon consideration and analyses of the costs, effectiveness, and benefits, and risks of appropriate, available, and feasible supply-side and demand-side options that meet Hawaii's Renewable Portfolio Standard Law, as defined in HRS ch. 269, part V, section 269-91 most *recently modified by Act 155.*

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4. CESP scenarios and the CESP Action Plan shall give consideration to the plans' impacts upon the utility's consumers, the environment, culture, community lifestyles, the State's economy, and society.

5. CESP scenarios and the CESP Action Plan shall take into consideration the need to preserve a stable electric grid and financially sound electric utility as vital components of our renewable energy future.

6. Clean energy scenario planning shall be an open public process. Opportunities shall be provided for participation by the public and governmental agencies in the development and in Commission review of the CESP scenarios and CESP Action Plan.

7. The utility is entitled to recover all appropriate and reasonable clean energy scenario planning and implementation costs.

8. The clean energy scenario planning process shall be focused on planning scenario analyses that provides flexibility across a wide range of potential futures and uncertainties that meet Hawaii's Renewable Portfolio Standard Law, as defined in HRS ch. 269, part V, section 269-91 most recently modified by Act 155.

C. Utility's Responsibility

1. Each utility is responsible for developing a reasonable number of CESP scenarios for meeting the energy needs of its customers to reflect a range of possible energy-related policy choices and risks facing the State, its utilities, and citizens. The CESP scenarios will be evaluated to help formulate the CESP Action Plan, covering a 5-year implementation period. Deleted:

2. The utility shall prepare and submit to the Commission a CESP filing which will include the CESP scenarios and CESP Action Plan and seek Commission approval at the time or times specified in this framework the utility's CESP Action Plan.

3. The utility shall execute the Commission approved CESP Action Plan in accordance with the CESP Framework. As part of this execution, the utility shall file for Commission review and approval individual applications for programs or elements of the CESP Action Plan that requires specific Commission approval.

4. In its development of the CESP scenarios and CESP Action Plan, the utility shall comply with State initiatives and Commission proceedings that consider such issues, but not limited to: 1) Competitive Bidding for future generation; 2) State Renewable Energy Portfolio Standards; 3) Energy Efficiency; 4) Renewable Energy Infrastructure Programs; 5) Distributed Generation; 6) Net Energy Metering; 7) Feed-in Tariffs; 8) Advanced Metering Infrastructure ("AMI"); 9) Energy Efficiency Portfolio Standards ("EEPS"); and 10) Greenhouse Gas ("GHG") initiatives.

D. Commission's Responsibility

1. The Commission's responsibility, in general, is to determine whether the utility's CESP scenarios and CESP Action Plan represents a reasonable course for meeting the energy needs of the utility's customers, is in the public interest, is consistent with this Clean Energy Scenario Planning Framework, and provides strategic guidance for future utility planning to meet Hawaii's Renewable Portfolio Standard Law, as defined in HRS ch. 269, part V, section 269-91 most recently modified by Act 155.

2. The Commission will review and approve in whole or in part the utility's CESP Action Plan as a reasonable course for meeting the energy needs of the utility's customers, is in the public interest, and is consistent with this Clean Energy Scenario Planning Framework. If the Commission rejects all or parts of the CESP Action Plan filed, there should be an explanation for non-approval and the implications of that non-approval on the utility's asset investment and strategic choices for the upcoming three-year period.

3. The Commission acknowledges that the purpose of the CESP process is to provide strategic guidance for future utility planning to achieve Hawaii's clean energy future, and that its review and any approval given to the CESP Action Plan will apply only to high level planning issues. Thus, the utility will file for Commission review and approval individual applications for programs or elements of the CESP Action Plan that requires specific Commission approval. The utility may file such applications before the Commission issues a final decision approving the CESP Action Plan and the Commission may review these individual applications for programs in parallel with the review of the CESP Action Plan.

4. Timely Commission review, approval, consent, or other action described in this Framework is essential to the efficient and effective execution of this clean energy scenario planning process. Accordingly, to expedite Commission action in this clean energy scenario planning process, whenever Commission review, approval, consent, or action is required under this Framework, the Commission may do so in an informal expedited process. The Commission hereby authorizes its Chairman, or his designee (which designee, may be another Commissioner, a member the Commission staff, Commission hearings officer, or a Commission hired consultant), in consultation with other Commissioners, Commission staff, and the Independent Observer, to take any such action on behalf of the Commission.

5. The Commission will serve as an arbiter of last resort, after the utility, Independent Observer, and Advisory Committee have attempted to resource any dispute or pending issue. The Commission will use an informal expedited process to resolve the dispute within thirty (30) days, as described in Section II.D.4 above. There shall be no right to hearing or appeal from this informal expedited dispute resolution process. The Commission encourages affected parties to seek to work cooperatively to resolve

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any dispute or pending issue, perhaps with the assistance of an Independent Observer, who may offer to mediate but who has no decision-making authority. The utility and Independent Observer shall conduct informal meetings with the Commission and Consumer Advocate to keep each apprised of issues that arise between or among the parties.

E. Consumer Advocate's Responsibility

1. The Director of Commerce and Consumer Affairs, as the Consumer Advocate and through the Division of Consumer Advocacy, has the statutory responsibility to represent, protect, and advance the interest of consumers of utility services. The Consumer Advocate, therefore, has the duty to ensure that the utility's CESP scenarios and CESP Action Plan promotes the interest of utility consumers.

2. The Consumer Advocate shall be a party to each utility's clean energy scenario planning docket and a member of any and all advisory committees established by the utility in the development of its CESP scenarios and CESP Action Plan. The Consumer Advocate shall also participate in all public hearings and other sessions held in furtherance of the utility's efforts in clean energy scenario planning.

F. Public Benefit Fee ("PBF") Administrator's Responsibility

1. The PBF Administrator's responsibility, in general, is to administer all energy efficiency programs in accordance with Public Benefits Fee HRS ch. 269, part VII and Docket No. 2007-0323.

2. The PBF Administrator shall be a party to each utility's clean energy scenario planning docket and a member of any and all advisory committees established by the utility in the development of its CESP scenarios and CESP Action Plan. The PBF Administrator shall also participate in all public hearings and other sessions held in furtherance of the utility's efforts in clean energy scenario planning.

G. Independent Observer's Responsibility — Formatted: Bullets and Numbering

1. The Independent Observer's responsibility, in general, is to monitor the clean energy scenario planning process and report on the progress and results to the Commission. — Formatted: Bullets and Numbering

2. The Independent Observer will have duties and obligations in two areas: Advisory and Monitoring. — Formatted: Bullets and Numbering

a. Advisory. The Independent Observer shall: — Formatted: Bullets and Numbering

(1) Certify to the Commission that the utility conducted the CESP process in accordance with this Clean Energy Scenario Planning Framework. — Formatted: Bullets and Numbering

(2) Advise the utility on its decision-making during the CESP process. Formatted: Bullets and Numbering

(3) Report immediately to the Commission of any deviations from this Clean Energy Scenario Planning Framework. Formatted: Bullets and Numbering

(4) After the utility's CESP process is completed, provide the Commission with: Formatted: Bullets and Numbering

i. An overall assessment of whether the goal of this Clean Energy Scenario Planning Framework was achieved; and

ii. Recommendations for improving future Clean Energy Scenario Planning processes.

(5) Be available to the Commission as a witness if required to evaluate a complaint filed against the utility for non-compliance with this Clean Energy Scenario Planning Framework, or if required in a future rate case if questions of prudence arise. Formatted: Bullets and Numbering

b. Monitoring. The Independent Observer shall: Formatted: Bullets and Numbering

(1) Monitor all steps in the Clean Energy Scenario Planning process. Formatted: Bullets and Numbering

(2) Monitor and facilitate communications (and communication protocols) with the Advisory Committee and public. Formatted: Bullets and Numbering

(3) Report to the Commission on monitoring results at key points along the planning process (such as at the establishment of key planning assumptions, at the establishment of scenarios to be evaluated, at the development of 20-year resource plans for each scenario and at the end of the process upon the filing of the CESP plan with the Commission) to facilitate focused review at these key points of the planning process and obtain Commission concurrence at each of these key steps. Formatted: Bullets and Numbering

3. The Independent Observer shall have no decision-making authority, and no obligation to resolve disputes, but may offer to mediate between disputing parties. Formatted: Bullets and Numbering

4. The Independent Observer shall provide comments and recommendations to the Commission, at the utility's or Commission's request, to assist in resolving disputes or making any required determinations under this Clean Energy Scenario Planning Framework. Formatted: Bullets and Numbering

5. Independent Observer qualifications. The Independent Observer shall be qualified for the tasks the observer must perform. Specifically, the Independent Observer shall: Formatted: Bullets and Numbering

a. Be knowledgeable about, or be able rapidly to absorb knowledge about, any unique characteristics and needs of the utility;

b. Be knowledgeable about the characteristics and needs of small, non-interconnected island electric grids, and be aware of the unique challenges and operational requirements of such systems;

c. Have the necessary experience and familiarity with utility modeling capability, transmission system planning, operational characteristics, and other factors that affect scenario analyses;

d. Be able to work effectively with the utility, the Commission, and its staff during the CESP process; and

e. Be able to demonstrate impartiality.

6. Selection and contracting. The utility shall: (a) identify qualified candidates for the role of Independent Observer; (b) seek and obtain Commission approval of its final list of qualified candidates; and (c) select an Independent Observer from among the Commission-approved qualified candidates. The utility's contract with the Independent Observer shall be acceptable to the Commission, and provide among other matters, that the Independent Observer: (a) report to the Commission and carry out such tasks as directed by the Commission, including the tasks described in this Clean Energy Scenario Planning Framework; (b) cannot be terminated and payment cannot be withheld without the consent of the Commission; and (c) can be terminated by the Commission without the utility's consent, if the Commission deems it to be in the public interest in the furtherance of the objectives of this Clean Energy Scenario Planning Framework to do so. The utility may recover prudently incurred Independent Observer costs from its customers upon approval of the Commission in a rate case or other appropriate proceeding, and may defer the costs prudently incurred for the Independent Observer (i.e., deferred accounting).

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III. The Planning Context

A. Major Steps

There are three major steps in the clean energy scenario planning process: planning, programming, and implementation.

1. Planning is that process in which the State initiatives, mandates, and Commission proceedings establish a "starting point" for the development of the CESP scenarios; the assumptions, costs, risks, trends, expected events, and uncertainties are clarified; the utility's generation and transmission needs are identified; Locational Value Maps are developed; and resource and program choices are subjected to scenario analyses

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to reflect a range of the possible energy-related policy choices and risks facing the utility systems and citizens. The product of this process is the utility's CESP scenarios. The planning horizon for the utility CESP is 20 years. Unless otherwise ordered by the Commission, the 20-year period begins January 1 following the completion of the CESP process.

2. Programming is that process by which the utility's CESP scenarios are evaluated and *programs or elements from one or more scenarios are scheduled for implementation* over a five-year period. In this process, a determination is made as to the order in which the selected program options are to be implemented; the phases or steps in which each program is to be implemented; the expected target group and the annual size of the target group or annual level of penetration of demand-side management programs; the expected annual supply-side capacity additions and the identification of the resource procurement method; transmission system additions; and the annual expenditures required to be made by the utility to support implementation of the programs. The result of this process is a program implementation schedule or CESP Action Plan. The CESP Action Plan represents a strategy or timetable for program implementation.

3. Implementation is that process by which the resource program options to be implemented are acquired and instituted in accordance with the utility's CESP Action Plan.

B. The Planning Cycle

1. Each utility shall conduct its initial CESP process for submittal to the Commission by the following dates:

   a. Hawaiian Electric Company, Inc.: 18 months after issuance of D&O for this framework.

   b. Hawaii Electric Light Company, Inc.: 18 months after issuance of D&O for this framework.

   c. Maui Electric Company, Limited: 18 months after issuance of D&O for this framework.

   d. Kauai Island Utility Cooperative: To be determined.

   Utilities that are affiliated shall conduct their clean energy scenario planning in coordination with each other or in parallel since the clean energy scenario plan for one island utility may affect the choices and actions of another island utility.

2. Each utility shall conduct a major review of its CESP every three years. In such a review, a new 20-year time horizon shall be adopted, the planning process repeated, and the utility's resource programs re-analyzed fully. A major review shall be conducted by each utility, resulting in the submission to the Commission of new CESP scenarios and CESP Action Plan in the same month every three years from the filing of the initial CESP.

C. The Docket

1. Each planning cycle for a utility will commence with the issuance of an order by the Commission opening a docket for CESP.

2. The docket will be maintained throughout the planning cycle for the filing of documents, the resolution of procedural disputes, and other purposes related to the utility's CESP scenarios and CESP Action Plan.

3. Within 30 days after the opening of the docket, the utility shall prepare, in consultation with the Consumer Advocate, and file with the Commission a schedule that it intends to follow in the development of its CESP scenarios and CESP Action Plan. The schedule may be amended upon the formation of an advisory committee or committees and thereafter as appropriate.

4. The utility shall complete its CESP scenarios and CESP Action Plan within one year of the commencement of the planning cycle.

D. Submissions to the Commission

1. The utility shall submit its CESP, which will include the CESP scenarios and CESP Action Plan as follows.

a. The utility shall include in its CESP a detailed description of:

(i) The factors and planning assumptions underlying the development of each scenario, which includes but is not limited to: (a) the initiatives, mandates and Commission proceedings that establish a "starting point" for the CESP scenarios; (b) the identification of generation and transmission needs; (c) the proposed procurement method for generation resources identified in the plans; (d) the forecasts made; (e) the assumptions underlying the forecasts; (f) the assumptions and the basis of the assumptions underlying the plans; (g) the risks and uncertainties associated with the plans; (h) the total resource cost of the plans; (i) the expected impact of the plans on demand; and (j) estimates of potential impact of the plans on customer rates and bills; and (k) the drivers of uncertainty that have a significant impact on the planning assumptions.

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(ii) Locational Value Maps identifying geographic areas of distribution system growth.

(iii) Renewable Energy Zones identifying potential areas of renewable energy development.

b. A reasonable number of CESP scenarios shall be analyzed and developed to reflect a range of possible energy-related policy choices and risks facing the utility systems and citizens. These scenarios may feature different policy backdrops, such as major increases or decreases in oil prices, policy changes such as federal or international carbon regulation or the adoption of plug-in hybrid electric vehicles/electric vehicles, as well as different resource policies such as higher levels of energy efficiency, demand response, and renewable substitution (e.g., solar water heating and seawater-cooled air conditioning). In addition, these scenarios may feature different economic and financial backdrops, such as ranges of future State economic health and ranges of future financial market conditions. The CESP scenarios will guide the utility to develop its CESP Action Plan.

c. The submissions should be simple and clearly written and, to the extent possible, in non-technical language. Charts, graphs, and other visual devices may be utilized to aid in understanding its plan and the analyses made by the utility. The utility shall provide an executive summary of the plan and of the *analyses and appropriately index its submissions.*

2. The utility shall submit its CESP Action Plan as follows.

a. The CESP Action Plan will be developed based on the CESP scenarios analyzed. The CESP Action Plan may contain elements or programs from one or more of the CESP scenarios. The evaluation of which elements to be included in the CESP Action Plan should be based on factors including but not limited to: (i) achieving state clean energy objectives; (ii) timing flexibility; and (iii) preserving a stable electric grid for the state's renewable energy future.

b. Information pertaining to energy efficiency demand-side management programs shall be provided to the utility from the PBF Administrator. The PBF Administrator shall include its projection of the energy and demand savings resulting from its energy efficiency programs and the expenditures required to be made to support the implementation of the energy efficiency programs.

c. The utility shall include its projection of the energy and demand savings resulting from its demand response programs and any pilot DSM programs and

the expenditures required to be made to support the implementation of these programs.

d. The utility shall include the expected supply-side capacity additions, the proposed procurement method for the supply-side additions (including the use of exemption or waiver from Competitive Bidding), and the cost required to be made by the utility to support the implementation of the supply-side resource options.

e. The utility shall include the expected transmission system additions and the estimated cost required to be made by the utility to support the implementation of the transmission additions.

f. The utility shall include identification of smart grid improvements and upgrades to the utility system and the estimated cost required to be made by the utility to support the implementation of any smart grid improvements.

g. The utility shall file with its CESP Action Plan a full description of the analysis upon which the schedule is based.

h. The CESP Action Plan shall also be accompanied by the utility's estimated costs and proposals for cost recovery, as appropriate.

i. The CESP Action Plan shall include any effort related to the implementation of the Framework for Competitive Bidding, including, but not limited to, the development of the request for proposal, parallel planning, and contingency planning.

3. The utility shall submit an evaluation report as follows.

a. The utility shall submit a minimum of one evaluation report between CESP cycles, preferably in the middle of the three years.

b. The utility shall include in its evaluation, an assessment of the continuing validity of the forecasts and assumptions upon which it's CESP Action Plan was fashioned, and update these assumptions as appropriate. Information pertaining to energy efficiency demand-side management programs shall be provided to the utility from the PBF Administrator.

c. The utility and the PBF Administrator shall also include for each demand response and energy efficiency program respectively included in the CESP Action Plan for the immediately preceding year a comparison of:

(1) The expenditures anticipated to be made and the expenditures actually made.

(2) The level of achievement of energy and demand impacts anticipated and the level actually attained.

d. The utility and the PBF Administrator shall provide an assessment of all substantial differences between original estimates and actual experience and of what the actual experience portends for the future. The PBF Administrator shall provide relevant information to the utility for incorporation into its evaluation report.

e. As part of its evaluation, the utility shall submit a revised CESP Action Plan that drops the immediately preceding year(s) from the schedule of the CESP Action Plan and include a corresponding new year(s). The CESP Action Plan must always reflect a five-year time span.

4. The utility may at any time, as a result of its evaluation or change in conditions, circumstances, or assumptions, revise or amend its CESP Action Plan, including LVMs and REZ. All revisions and amendments must conform to the appropriate requirements of this part D.

5. The utility may, at any time, request a waiver from the Commission from any or all of the provisions of the CESP Framework. A utility seeking such a waiver shall have the burden of showing, to the Commission's satisfaction, that compliance with the CESP Framework, or any of its provisions, is impossible, impractical, inappropriate or economically infeasible. Any waiver that a utility may seek should be sought at the earliest feasible and possible moment, at least not later than the moment it becomes apparent that the utility does not intend to comply with a particular CESP Framework requirement.

6. Notwithstanding the above, the Commission, upon a showing or submission that a utility has an ownership structure in which there is no substantial difference in economic interests between its owners and its customers[1], may waive or exempt that utility from any or all of the provisions of the CESP Framework.

7. The CESP Action Plan approved by the Commission shall provide guidance for all utility expenditures for capital projects, purchased power, and demand response programs, and the PBF Administrator's expenditure for energy efficiency programs. Notwithstanding approval of the CESP Action Plan: (a) an expenditure for any capital project in excess of $2,500,000, excluding customer contributions, shall be submitted to the Commission for review as provided in paragraph 2.3. g. 2 of General

[1] Such as a member-owned cooperative.

Order No.7 (as amended by Decision and Order No. 21002, filed May 27, 2004 in Docket No. 03-0257); and (b) no obligation under any purchased power contract shall be undertaken and no expenditure for any specific demand-side management program included in the CESP Action Plan shall be made without prior Commission approval of the purchased power contract or demand-side management program. Projects and programs do not have to be included in the approved CESP Action Plan to be consistent with the CESP. Specific capital expenditures projects may not be identified or discussed in the CESP process because they are generally described as generic projects. All power purchases from qualifying facilities and independent power producers shall be subject to statute and Commission rules and also may not be identified or specifically discussed in the CESP because proposals may be received at unforeseen times. Other types of projects, such as distribution projects, generally will not be analyzed in the CESP process but the distribution planning process is coordinated with the CESP. The utility may file for Commission review and approval individual applications for execution and implementation of projects, studies, programs, and other elements of the CESP Action Plan before the Commission issues a final decision approving the CESP Action Plan and the Commission may review these individual applications for programs in parallel with the review of the CESP Action Plan.

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8. The CESP scenarios and CESP Action Plan resulting from this planning framework is not fixed and unchanging. The CESP scenarios and CESP Action Plan shall be flexible enough to account for changes in planning assumptions and forecasts. This will allow for major decisions regarding the implementation of program options (both supply-side and demand-side resources) to be made incrementally, based on the best available information at the time decisions must be made. The CESP scenario analyses shall identify what information is critical to the decision making process, and also identify when the strategic decisions need to be made.

E. Public Participation

To encourage public participation in each utility's clean energy scenario planning process, opportunities for such participation shall be provided through advisory committees to the utility, public hearings, and interventions in formal proceedings before the Commission.

1. Advisory Committees

   a. The utility shall organize in each county in which the utility provides service or conducts utility business a group or groups of representatives of public and private entities to provide input to the utility and the PBF Administrator in the development of its CESP. A separate advisory committee may be formed for each stage of the planning process, as appropriate. The utility shall chair each advisory committee. The Independent Observer shall facilitate all Advisory Committee meetings.

b. The public and private entities includable in an advisory committee are those that represent interests that are affected by the utility's CESP scenarios and that can provide significant perspective or useful expertise in the development of the scenarios. These entities include state and county agencies and environmental, cultural, business, and community interest groups. An advisory committee should be representative of as broad a spectrum of interests as possible, subject to the limitation that the interests represented should not be so numerous as to make deliberations as a group unwieldy and to allow for the timely completion and filing of a CESP.

c. The utility shall hold meetings with the advisory committee, facilitated by the Independent Observer, during key phases of the process and in between full CESP cycles with a minimum quarterly participation to the extent meaningful and practical. The PBF Administrator shall attend meetings to support their forecast of energy efficiency programs.

d. The utility shall consider the input of each advisory committee; but the utility is not bound to follow the advice of any advisory committee.

e. All data reasonably necessary for an advisory committee to participate in the utility's clean energy scenario planning process shall be provided by the utility, subject to the need to protect the confidentiality of customer-specific and proprietary information.

f. The use by the advisory committees of the collaborative process is encouraged to arrive at a consensus on issues.

g. All reasonable out-of-pocket costs incurred by participants in advisory committees (other than governmental agencies) shall be paid for by the utility, subject to recovery as part of the utility's cost of clean energy scenario planning.

2. Public hearings

a. The utility is encouraged to conduct public meetings or provide public forums at the various, discrete phases of the planning process for the purpose of securing the input of those members of the public who are not represented by entities constituting advisory committees. Any public meetings or public forums shall be facilitated by the Independent Observer.

b. Upon the filing of requests for approval of a CESP Action Plan, the Commission may, and it shall where required by statute, conduct public hearings for the purpose of securing public input on the utility's proposal. The

Commission may also conduct such informal public meetings as it deems advisable.

3. Intervention

   a. Upon the filing of its CESP, the utility shall cause to be published in a newspaper of general circulation in the State a notice informing the general public that the utility has filed its proposed CESP Action Plan with the Commission for the Commission's approval.

   b. To encourage public awareness of the filing of the CESP, a copy of the CESP Action Plan and the supporting analysis shall be available for public review at the Commission's office and at the office of the Commission's representative in the county serviced by the utility. The utilities shall provide copies of these documents online on its website. Each utility shall note the availability of the documents for public review at these locations in its published notice. The utility shall make copies of the executive summary of the plan and the analysis available to the general public at no cost, except the cost of duplication.

   c. Applications to intervene or to participate without intervention in any proceeding in which a utility seeks Commission approval of its CESP Action Plan are subject to the rules prescribed in Hawaii Administrative Rules, Chapter 6-61 (Rules of Practice and Procedure before the Public Utilities Commission); except that such applications may be filed with the Commission not later than 20 days after the publication by the utility of a notice informing the general public of the filing of the utility's application for Commission approval of its CESP Action Plan, notwithstanding the opening of the docket before such publication.

   d. A person's status as an intervenor or participant shall continue through the life of the docket, unless the person voluntarily withdraws or is dismissed as an intervenor or participant by the Commission for cause.

4. Intervenor funding

   a. Upon the issuance of the Commission's final order on a utility's CESP Action Plan or any amendment to the CESP Action Plan, the Commission may grant an intervenor or participant (other than a governmental agency, a for-profit entity, and an association of for-profit entities) recovery of all or part of the intervenor's or participant's direct out-of-pocket costs reasonably and necessarily incurred in intervention or participation. Any recovery and the amount of such recovery are in the sole discretion of the Commission. All intervenors and participants (who plan to seek intervenor funding) must file a

budget with the Commission within 30 days after intervention is granted, setting forth:

(1) the estimated cost of intervention or participation;

(2) the level of funding expected to be funded from other sources; and

(3) the net amount expected to be recovered from utility ratepayers.

b. To be eligible for such recovery:

(1) The intervenor or participant must show a need for financial assistance;

(2) The intervenor or participant must demonstrate that it has made reasonable efforts to secure funding elsewhere, without success;

(3) The intervenor or participant must maintain accurate and meaningful books of account on the expenditures incurred; and

(4) The Commission must find that the intervenor or participant made a substantial contribution in assisting the Commission in arriving at its decision.

c. The intervenor's or participant's books of account are subject to audit, and the Commission may impose other requirements in any specific case.

d. Such allowance may be made only upon the application of the intervenor or participant within 20 days after the issuance of the Commission's final order, together with justification and documented proof of the costs incurred.

e. The costs of intervenor funding shall be paid for by the utility, subject to recovery as part of its costs of clean energy scenario planning.

F. Cost Recovery and Incentives

1. The utility is entitled to recover its clean energy scenario planning and implementation costs that are reasonably incurred, including the costs of planning and implementing pilot and full-scale utility demand-side management programs.

a. The cost recovery may be had through the following mechanisms:

(1) Base rate recovery--the inclusion of costs in the utility's base rate during each rate case. The utility shall record costs associated with the clean

energy scenario planning in separate accounts to allow review of the actual costs incurred to the forecasted costs presented in each rate case.

(2) Ratebasing--the inclusion of costs that are capital in character (i.e., expenditures considered to produce long-term savings or benefits, such as appliance rebates, loans, etc.), with accumulated AFUDC, in the utility's rate base at its next rate case. The costs are to be amortized over a period set by the Commission.

(3) Escrow accounting--the accumulation, with interest, of costs, not capital in character, incurred between rate cases and not otherwise recovered through the utility's base rates, adjustment clause, or rate base, in a deferred account, to be amortized over a period set by the Commission.

b. The Commission will determine the appropriate mechanism for the recovery of costs associated with demand-side management programs when specific demand-side management programs are submitted for Commission approval. Cost recovery for other CESP programs generally will be addressed in each utility's rate case.

2. Under appropriate circumstances, the Commission may provide the PBF Administrator with incentives to encourage participation in and promotion of full-scale energy efficiency programs.

a. The incentives may take any form approved by the Commission. Among the possible forms are:

(1) Granting the PBF Administrator a percentage share of the gross or net benefits attributable to energy efficiency programs (shared savings).

(2) Granting the PBF Administrator a percentage of certain specific expenditures it makes in energy efficiency programs (mark-up).

b. The Commission will determine whether the PBF Administrator will be provided with incentives and the form of such incentives, if any, when specific energy efficiency programs are submitted for approval. The PBF Administrator may propose incentive forms for a particular program, based on the particular attributes of the program and the results to be attained.

c. The Commission may terminate any and all incentives whenever circumstances or conditions warrant such termination.

IV. Planning Considerations

A. Energy and Demand Forecasts

1. The utility shall develop forecasts of the amount of energy consumers will need and the expected annual peak demand over the planning horizon. It shall develop load forecasts for a reasonable number of scenarios that are developed as necessary or appropriate in the development of its CESP scenarios. The utility may retain expert consultants to assist in the development of an economic outlook and for other specialized and technical needs related to this purpose.

2. The utilities may initiate various research programs to obtain detailed energy usage information about Hawaii energy customers so this information can be used to develop energy efficiency program designs and forecasts for future energy planning efforts.

3. To the extent practical, the utility should provide load by geographic location on its system.

B. Fuel Forecasts

1. The utility shall develop forecasts of the cost of fuel over the planning horizon. It shall develop fuel forecasts for a reasonable number of scenarios that are developed as necessary or appropriate in the development of its CESP scenarios. The utility may retain expert consultants to assist in the development of the fuel forecasts and for other specialized and technical needs related to this purpose.

C. Demand-Side Management Forecasts

1. Energy Efficiency – The PBF Administrator shall administer all energy efficiency programs in accordance with Public Benefits Fee HRS ch. 269, part VII and Docket No. 2007-0323. The utilities shall support and participate in the PBF Administrator's implementation of the energy efficiency programs.

a. The PBF Administrator, utilities, and stakeholders, such as the advisory committee, shall work together in a collaborative process to design effective, high-impact energy efficiency programs that will be implemented in the Action Plan.

b. The PBF Administrator shall lead, in collaboration with the utility and the State, new studies and forecasts to determine the technical and economic potential for a broad variety of energy efficiency measures within Hawaii.

2. Demand Response – The utility shall be responsible for the administration of demand response and load management programs because of the need to monitor electrical system status while deciding when and to what degree to invoke the demand reductions available through demand response programs. Third-party demand response and load curtailment aggregators should be allowed to support and participate in the utilities' implementation of the demand response programs.

    a. Program costs for existing load management and any new pilots and full-scale demand response programs shall be recovered through the appropriate cost recovery mechanism.

    b. The utility shall lead, in collaboration with the PBF Administrator and the State, new studies and forecasts to determine the technical and economic potential for a broad variety of demand response measures within Hawaii.

D. Distributed Generation Forecast

1. The utility shall develop a forecast of the amount of distributed generation that could be installed by utility customers, third parties, or the utility over the planning horizon. The distributed generation resources considered in the forecast shall include, but not be limited to, the following:

    a. Biofueled and fossil fueled generating resources;

    b. Combined heat and power resources;

    c. Photovoltaic resources;

    d. Small wind and hydro resources; and

    e. Other small renewable energy resources as defined by HRS §269-91 of the State's RPS.

2. The distributed generation forecast shall include reexamination of the following:

    a. NEM limits in accordance with Docket No. 2006-0084; and

    b. FIT provisions in accordance with Docket No. 2008-0273.

E. Resource Options

1. In the development of its CESP scenarios, the utility shall consider supply-side and demand-side resource options appropriate to Hawaii and available within the years

encompassed by the clean energy scenario planning horizon to meet the stated governing principles and planning context.

2. The utility shall consider among the options the supply-side and demand-side resources or mixes of options currently in use, promoted, planned, or programmed for implementation by the utility. Supply-side and demand-side resource options include those resources that are or may be supplied by persons other than the utility.

3. The utility shall integrate the Competitive Bidding Framework, Docket No. 03-0372. The CESP scenarios and CESP Action Plan shall identify those resources for which the utility proposes to acquire through competitive bidding, those resources that may be exempt from competitive bidding, and those resources for which the utility will need to seek waivers from competitive bidding, and shall include an explanation of the facts supporting waivers.

   a. The CESP scenarios and CESP Action Plan shall specify the proposed scope of the Request for Proposal for any specific generation resource or block of generation resources that the CESP states will be subject to competitive bidding, including but not limited to the size, timing, and operational characteristics of the generation resource or block of generation resources.

   b. The utility is unable to predict what type of resource and associated costs will be selected as an outcome of implementing the competitive bidding framework. For the purposes of developing the CESP scenarios, the utility may use generic resource data (i.e., biofueled combustion turbine, wind, PV) available for determining the size, timing, and operational characteristics of future resources. The utility shall provide all resource data used in the development of the CESP scenarios.

4. The costs and benefits shall, to the extent possible and feasible, be (a) quantified and (b) expressed in dollar terms. When it is neither possible nor feasible to quantify any cost or benefit, such cost or benefit shall be qualitatively measured. The methodology used in quantifying or in qualitatively stating costs and benefits shall be detailed.

F. Locational Value Maps

1. The utility shall identify general geographic areas of distribution system growth within the next 3-5 years where distributed resources and energy efficiency could be beneficial within the existing transmission and distribution system limits.

2. The utility shall identify general geographic areas of distribution system penetration by all forms distributed generation resources.

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3. The utility shall identify general geographic areas rather than individual circuits to maximize benefits and incorporate back-up system needs.

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4. The information from the Locational Value Maps shall be provided to parties such as the PBF Administrator so that energy efficiency DSM can be focused into geographic areas that would most benefit from energy efficiency DSM programs.

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5. The utility should use the Locational Value Map to identify Clean Energy Investment Zones. The utility should publicize the existence of these zones in conjunction with the utility's education efforts following the completion of the CESP.

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G. Renewable Energy Zones

1. The Energy Resources Coordinator as defined in HRS ch. 196, part III, section 196-4 most recently modified by Act 155 shall identify Renewable Energy Zones where areas of its service territory contain significant renewable resource potential and coordinate with the utility. The CESP shall identify possible infrastructure requirements needed to interconnect the utility's grid to the REZ and operationally integrate renewable resources that may be developed in the REZ with the utility's system.

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H. Assumptions; Risks; Uncertainties

1. The utility shall identify the assumptions underlying any forecast, resource option, the cost or benefit of any option or any analysis performed.

2. The utility shall also identify the risks and uncertainties associated with each forecast and resource option.

3. The utility shall further identify any technological limitations, infrastructural constraints, legal and governmental policy requirements, and other constraints that impact on any option or the utility's analysis.

I. Models

1. The utility may utilize any reasonable model or models in comparing resource options and otherwise in analyzing the relative values of the various options or combinations of options.

2. Each model used must be fully described and documented.

J. Analyses

1. The CESP scenarios should focus on higher level planning using a portfolio of energy resources/types rather than identifying specific details on individual resources in the plan.

2. The utility shall review the CESP scenarios to look for common themes, assets and strategies that demonstrate robust value to balance costs and risks across many of the scenarios evaluated. Resources and strategies that provide the greatest value and flexibility across a wide range of potential futures and uncertainties shall be identified.

3. The CESP scenarios shall identify the preferred energy contributions from various resources, taking into account the differing renewable energy impact, emissions, fossil fuel usage and cost (utility and total resource cost perspective) into consideration. All existing contractual and forward looking operational requirements and constraints on the utility grid shall be factored into the analysis.
4. The utility shall compare the CESP scenarios on the present value basis. For this purpose, the utility shall discount the estimated annual costs (and benefits, as appropriate) at an appropriate rate. The utility shall fully explain the rationale for its choice of the discount rate.

5. The CESP scenarios shall be supported by quantitative and qualitative analyses to the extent reasonably possible and feasible.

6. Technical analyses shall be performed to determine the extent to which renewable resources with certain types of characteristics (e.g., variable, as-available resources, or fixed dispatched resources) can be integrated into the utility system grid while maintaining stability and reliability.

7. The utility shall conduct a high-level load flow transmission system analysis building on the base case planning considerations, evaluating grid conditions and flows for no less than a three-year period. The CESP scenarios shall evaluate system level distributed generation and DSM impact, taking into account the aggregate system impact to load and load flows on the transmission system to determine transmission and generation system benefits. New transmission assets triggered by load growth, addition of new or expanded generation, or a change in planning criteria that require Commission approval shall be identified.

8. The utility shall provide estimates of potential impacts of the CESP scenarios on customer rates and bills.

9. The CESP scenarios shall identify the size, timing, and operational characteristics of future resources in accordance with the Competitive Bidding Framework, Docket No. 03-0372.

10. The CESP scenarios shall provide guidance for the utilities to develop the CESP Action Plan.

V. Pilot Demand-Side Management Programs

A. Purposes

1. A purpose of piloting demand-side management programs is to ascertain whether a given program, not yet proven in Hawaii, is cost-effective--whether it will achieve the objectives as originally believed.

2. A second purpose of piloting demand-side management programs is to determine whether the program design and configuration (including how it is managed and promoted) are such as to permit implementation of the program as efficiently and effectively as desired.

B. Utility Pilot Programs

1. A utility may implement on a full-scale basis (without pilot testing) any demand response program that has been proven cost effective as a result of a full-scale or pilot implementation of the program in another service territory or as a result of pilot testing in Hawaii.

2. The utility may develop appropriate pilot demand response programs for implementation without awaiting Commission approval of the utility's CESP Action Plan.

3. All utility proposed pilot demand response programs are subject to Commission approval.